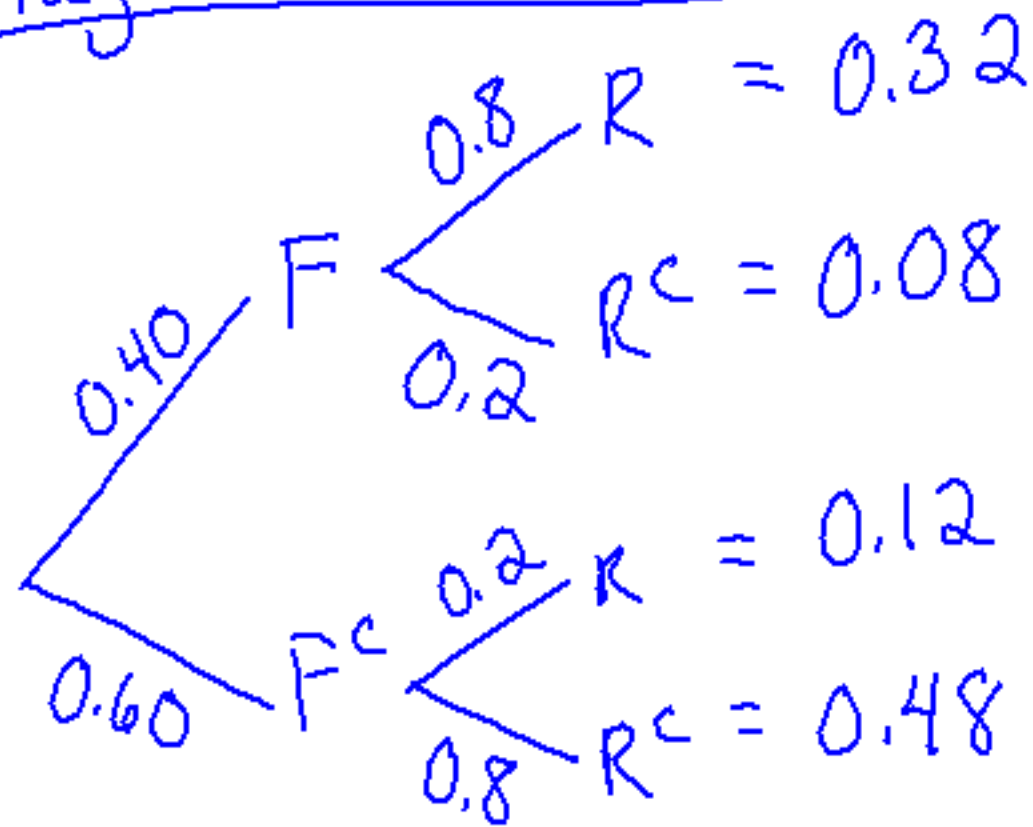


Multistage Rvw. Probs.

①



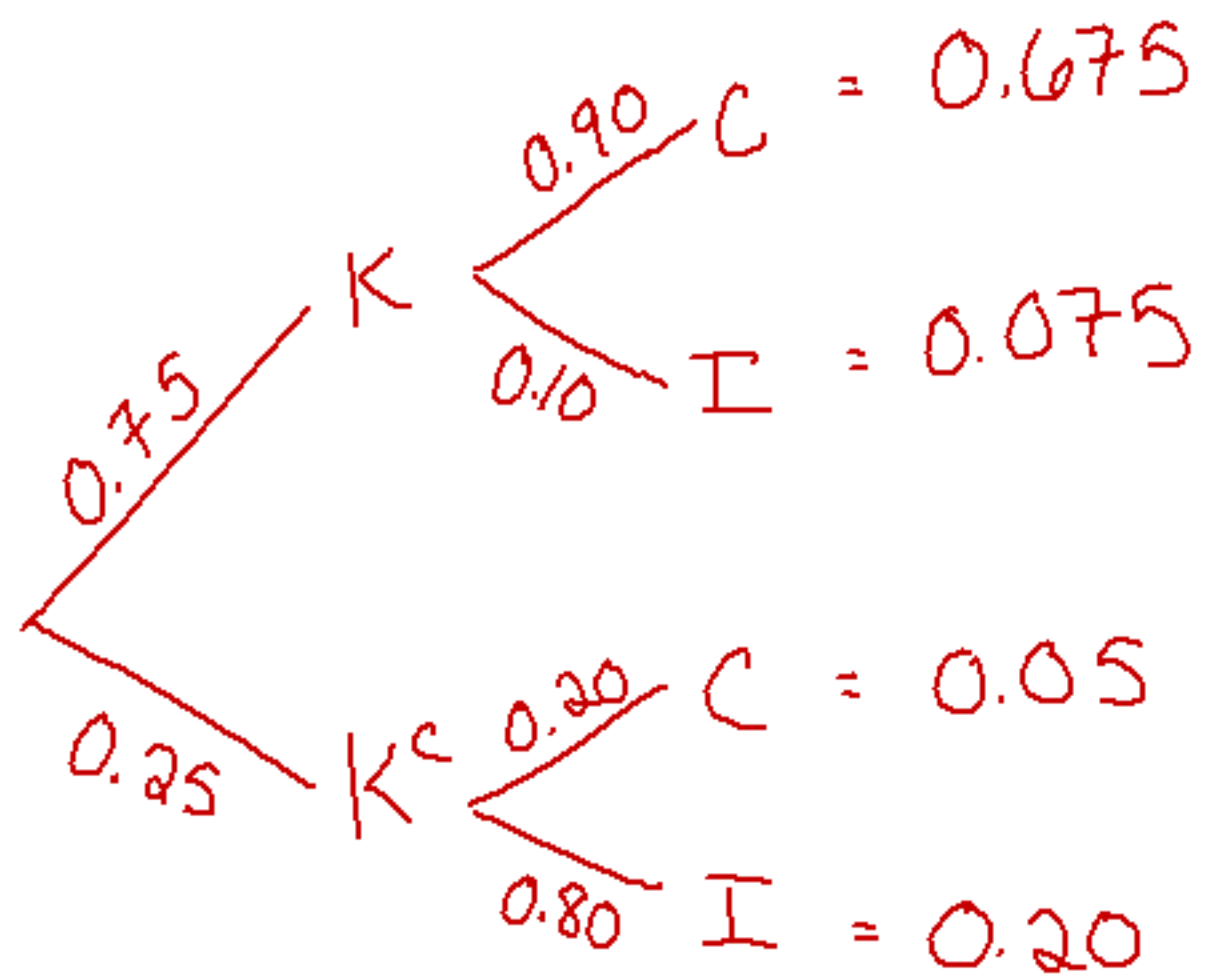
a) $P(R) = 0.44$

b) $P(F|R) = \frac{0.32}{0.44} = 0.73$

c) $P(R^c) = 0.56$

d) $P(F^c|R^c) = \frac{0.48}{0.56} = 0.857$

②



a) $P(C) = 0.725$

b) $P(K^c|C) =$

$$\frac{0.05}{0.725} = \textcircled{0.07}$$

Permutations = prizes, positions

• Arranging n objects, taking r @ a time

• $nPr = \frac{n!}{(n-r)!}$

total
of
objects
available

objects
chosen

• Calculator

n math \rightarrow prb $\rightarrow nPr$ r

• Order DOES matter

• more possibilities
 $AB \neq BA$

Ex: $n=50$ Permutation
 $r=3$

$$\underline{50 \text{ nPr } 3 = 117,600}$$

Combinations = committee, sample

- The number of groups of n objects taking r @ a time.

$$nC_r = \frac{n!}{r!(n-r)!}$$

Calc:

$n \rightarrow \text{math-Prb} \rightarrow nCr \rightarrow r$

- Order doesn't matter
- less possibilities

$$AB = BA$$

Ex: $n=21$ $r=8$ ${}^{21}C_8 = 203,490$

Counting Rules

Looking for all possible ways combine
different groups

- Formula: $m \cdot n \cdot t$

$$3 \cdot 4 \cdot 3 \cdot 3 = 108$$

Ex:

Pres/VP

Cancel

$$(30 \text{ nPr } 2) \cdot (28 \text{ nCr } 6)$$

$$327,763,800$$

Wkst:

① 5040

② 239,500,800

③ 65,000,000

④ 252

⑤ 240

⑥ 63

⑦ 17160

⑧ 715